

USSR

UDC 669.14.01:62-50:62-50

DANICHEV, R. I., ~~TRISHIN, N. N.~~ ZIL'BERMAN, A. T., PEROMONOVA, N. I., and KUTYKHOVA, T. I., and SAMOKHIN, A. T.; Dnepropetrovsk Metallurgical Institute.

"Nonmetallic Inclusions in Structural Titanium-Containing Steels

Novokuznetsk, Izv. VUZ, Chern. Metallurgiya, No 10, 1970, pp 18-21.

Abstract: The influence of the deoxidation mode on the content and composition of nonmetallic inclusions in structural titanium-containing steels is studied with two versions of smelting: the current technology, and an experimental technology involving preliminary deoxidation of the metal with aluminum, calcium-silicon alloy, and diffusion deoxidation with powders of 70% ferro-silicon (0.4-0.6%), aluminum (0.1-0.25%), and coke (0.2-0.3%). Sedimentation deoxidation with aluminum (0.07-0.08%) is performed before introducing the ferro-titanium. This deoxidation forms nonmetallic inclusions predominantly composed of oxides, which facilitates their rapid removal from the metal. The improved deoxidation mode, in combination with protection of the stream of metal from the air by oxides during casting, allows the mean content of nonmetallic inclusions to be reduced from 0.011 to 0.006%. Rejection of castings with inclusions 11.5 to 8.4%.

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1/2 025 UNCLASSIFIED PROCESSING DATE--04DEC70  
TITLE--ALLOY ELEMENT WASTE IN HIGH SPEED STEEL MELTS -U-  
AUTHOR--(04)-CHUYKO, N.M., GASIK, M.I., ZAOZERNYY, N.T., PARKHOMENKO, G.P.  
COUNTRY OF INFO--USSR  
SOURCE--MOSCOW, METALLURG., NO 5, MAY 70, PP 22-24  
DATE PUBLISHED----MAY70  
SUBJECT AREAS--MATERIALS  
TOPIC TAGS--HIGH SPEED STEEL, METAL MELTING, ALLOY DESIGNATION, STEEL  
SCRAP, TUNGSTEN STEEL, VANADIUM STEEL, CHROMIUM STEEL, METALLURGIC  
RESEARCH FACILITY, ARC FURNACE/(U)R9 HIGH SPEED STEEL, (U)R12 HIGH SPEED  
STEEL, (U)R18 HIGH SPEED STEEL  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAE--3007/0407 STEP NO--UR/0130/70/000/005/0022/0024  
CIRC ACCESSION NO--AP0135880  
UNCLASSIFIED

2/2 025

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0135880

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ALLOYING OF HIGH SPEED STEEL IN ELECTRIC ARC FURNACES IS ACCOMPANIED BY SUBSTANTIAL LOSSES OF SUCH ALLOYING ELEMENTS AS TUNGSTEN, VANADIUM, AND CHROMIUM. THE PURPOSE OF THIS ARTICLE IS TO CLARIFY THE BASIC CAUSES OF INCREASING LOSSES IN TUNGSTEN AND OTHER ALLOYING ELEMENTS DURING THE ELECTRIC ARC PROCESS. IN THE COURSE OF THIS STUDY, A STATISTICAL ANALYSIS WAS MADE OF 479 ALLOYS OF R18, R12, AND R9 STEEL AT AN UNIDENTIFIED PLANT IN 1968. THE MELTS WERE MADE IN FURNACES WITH CAPACITIES OF 7.5 AND 17.5 TONS. THE R18 STEEL CONTAINED 50PERCENT HIGH SPEED STEEL SCRAP AND THE REQUIRED QUANTITY OF FERROTUNGSTEN; THE R12 AND R9 STEELS WERE OBTAINED BY REMELTING THE SCRAP. THE STATISTICS SHOWED THAT THE TUNGSTEN LOSS WAS FROM 8 TO 13PERCENT, THE VANADIUM LOSS 18-28PERCENT, AND THE CHROMIUM LOSS ABOUT 13PERCENT. AN ACCOMPANYING TABLE SHOWS THE LOSSES FOR EACH ELEMENT IN PERCENTAGE, KOLOGRAMS PER METER, AND RUBLES PER METER FOR THE THREE STEEL TYPES. THERE IS ALSO A TABLE GIVING THE RESULTS OF R18 SMELTING IN A 7.5 TON CAPACITY ARC FURNACE. FINALLY, THERE ARE THREE CURVES SHOWING THE LOSS OF TUNGSTEN IN ALLOYING R18 STEEL AS A FUNCTION OF THE DURATION OF THE SMELTING PERIOD, OF THE TIME OF YEAR, AND OF THE DURATION OF R18 SCRAP REMELTING. FACILITY: DNEPROPETROVSK METALLURGICAL INSTITUTE.

UNCLASSIFIED

Steels

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USSR

UDC 669.187.2:669.046.548.2

CHUYAO, N. M., GASIK, M. I., ZAOZERNYY, N. T., PARKHOMENKO, G. P.,  
Dnepropetrovsk Metallurgical Institute

"Alloy Element Waste in High-Speed Steel Melts"

Moscow, Metallurg., No 5, May 70, pp 22-24

Abstract: The alloying of high-speed steel in electric-arc furnaces is accompanied by substantial losses of such alloying elements as tungsten, vanadium, and chromium. The purpose of this article is to clarify the basic causes of increasing losses in tungsten and other alloying elements during the electric-arc process. In the course of this study, a statistical analysis was made of 479 alloys of R18, R12, and R9 steel at an unidentified plant in 1968. The melts were made in furnaces with capacities of 7.5 and 17.5 tons. The R18 steel contained 50% high-speed steel scrap and the required quantity of ferrotungsten; the R12 1/2

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CHUYKO, N. M., et al., Metallurg., No 5, May 70, pp 22-24

and R9 steels were obtained by remelting the scrap. The statistics showed that the tungsten loss was from 8 to 13%, the vanadium loss 18-28%, and the chromium loss about 13%. An accompanying table shows the losses for each element in percentage, kilograms per meter, and rubles per meter for the three steel types. There is also a table giving the results of R18 smelting in a 7.5-ton capacity arc furnace. Finally, there are three curves showing the loss of tungsten in alloying R18 steel as a function of the duration of the smelting period, of the time of year, and of the duration of R18 scrap remelting.

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- 70 -

Acc. Nr: **AP0049048**

Ref. Code: **UR 0357**

PRIMARY SOURCE: Vestnik Oftal'mologii, 1970, Nr 1 ,  
PP **58-60**

AN ABSCESS AT THE ROOT OF THE FRONTAL LOBE FOLLOWING  
PENETRATING WOUND OF THE ORBIT

B. M. Nikiforov, S. M. Chulko, T. G. Shchedrina

Summary

A case of penetrating wound of the orbit with its osteal fragment entering the frontal lobe, followed by the development of an abscess and its successful surgical treatment, is reported. In the diagnosis of complicated penetrating wounds of the orbit roentgenological examination and cerebrospinal fluid findings obtained by an early lumbar puncture are of major importance.

111  
REEL/FAME  
**19800834**

24 2

1/2 012 UNCLASSIFIED PROCESSING DATE--30OCT70  
TITLE--PHYSICOCHEMICAL PROPERTIES OF 2,3,QUINOXALINEDITHIOL -U-  
AUTHOR--(03)--CHERNOMORCHENKO, L.I., AKHMETSHIN, A.G., CHUIKO, V.T.  
COUNTRY OF INFO--USSR  
SOURCE--ZH. ANAL. KHIM. 1970, 25(2), 231-6  
DATE PUBLISHED--70  
SUBJECT AREAS--CHEMISTRY  
TOPIC TAGS--PHYSICAL CHEMISTRY PROPERTY, THIOL, AQUEOUS SOLUTION, CHEMICAL  
STABILITY, IONIZATION CONSTANT, AMPEROMETRIC TITRATION  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRA--2000/2179 STEP NO--UR/0075/70/025/002/0231/0236  
CIRC ACCESSION NO--AP0125759  
UNCLASSIFIED

2/2 012

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0125759

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE STABILITY OF AQ. DIMETHYLFORMAMIDE SOLNS. OF 2,3,QUINOXALINEDITHIOL (I) WAS STUDIED. THE DECOMP. RATE OF THE REAGENT SOLNS. GREATLY DECREASES AFTER ACIDIFICATION. THE OPTIMUM RATIO OF THE SOLVENT COMP. IS 70PERCENT DIMETHYLFORMAMIDE WITH 30PERCENT H SUB2 O. THE IONIZATION CONSTS. OF THE REAGENT IN AQ. DIMETHYLFORMAMIDE SOLNS. WERE DETD. BY A POTENTIOMETRIC METHOD. PK VALUES DEPEND LINEARLY ON THE WATER CONTENT. THE IONIZATION CONSTS. OBTAINED BY EXTRAPOLATION OF THE STRAIGHT LINES TO VALUES CORRESPONDING TO 100PERCENT H SUB2 O CONTENT ARE IN GOOD AGREEMENT WITH DATA OBTAINED BY THE SOLY. METHOD. I IS A WEAK ACID WITH DISSOCN. CONSTS. K SUB1 EQUALS 1.16 TIMES 10 PRIME NEGATIVE7 (PK SUB1 6.95) AND K SUB2 EQUALS 1.23 TIMES 10 PRIME NEGATIVE10 (PK SUB2 9.91). I IS READILY OXIDIZED ON A GRAPHITE MICROANODE AND GIVES SEVERAL WELL DEFINED STAGES OF THE DIFFUSION CURRENT, THEIR HEIGHT BEING PROPORTIONAL TO THE CONC. OF I. THIS CAN BE USED FOR THE AMPEROMETRIC DETN. OF SEVERAL ELEMENTS. FACILITY: DNEPROPETROVSK STATE UNIV., DNEPRCPETROVSK, USSR.

UNCLASSIFIED



USSR

KAGANOV, V. Yu., BLINOV, O. M., KONYASHIN, V. I., and CHUYKO, Yu. N., Moscow  
Institute of Steel and Alloys

"Investigation of the Possibility of Controlling Steel Composition by the  
Method of Thermoelectromotive Force"

Moscow, Izvestiya Vysshikh Uchebnykh Zavedeniy -- Chernaya Metallurgiya, No 9,  
1970, pp 171-174

Abstract: An investigation was made of the combined effect of C, Si, Mn, and Cr on the thermoelectric properties of steel relative to VR-5 thermoelectrodes and VR-5/20 thermocouples at various average temperatures of sample cooling. The experiments were conducted on cooling metal samples taken from the furnace at 1020°C to 740°C. A statistical model developed for the thermoelectric properties of Fe alloys can be applied to the process of ShKh15 steel production in the temperature range indicated above. The model makes it possible, if the chemical composition of the steel is known, to determine its thermoelectric properties, or, if the content of three admixtures is known, to determine the content of any fourth admixture (the deviation from the real value does not exceed  $\pm 0.05\%$ ). The model also demonstrates the possibility of the simultaneous determination of chemical composition according to four admixtures.

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Organometallic Compounds

USSR

UDC 539.193:547.242

KONDRAT'YEVA, O. I., TROITSKAYA, A. D., CHADAYEVA, N. A., CHUYKOVA, A. I.,  
USACHEVA, G. M., and IVANTSOV, A. Ye., Kazan' Chemical Technological  
Institute Imeni S. M. Kirov and Kazan' Institute of Organic and Physical  
Chemistry Imeni A. Ye. Arbuzov, Academy of Sciences USSR

"Investigation of the Complex Compounds of Chromium (I) With Organic  
Derivatives of Arsenic by the EPR Method"

Leningrad, Zhurnal Obshchey Khimii, Vol 43 (105), No 9, Sep 73, pp 2087-2088

Abstract: Eight new complex compounds of chromium (I) with organic derivatives  
of arsenic (III) were obtained in acetone solution. The reaction occurred  
instantaneously at room temperature with a slight excess of the arsenic com-  
ponent. It was found that changes even in remote areas surrounding arsenic  
had a definite effect on the characteristics of the chromium(I)-arsenic(III)  
bond, which could be due to a possible decrease of the participation of S  
electrons in formation of  $sp^n$ -hybrid orbitals.

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USSR

UDC 669.27.-172

KOPETSKIY, CH. V., ORZHEKHOVSKIY, V. L., PASHKOVSKIY, A. I., and  
CHUZHKO, R. K., Moscow

"Influence of Carbon on the Structure and Mechanical Properties  
of Tungsten Single Crystals"

Moscow, IAN SSSR, Metally, No 2, Mar-Apr 71, pp 124-129

Abstract: Although the literature contains a number of works dealing with the investigation of the mechanical properties of tungsten crystals, the influence of carbon on these characteristics has not as yet been studied in detail. This work presents a study of the influence of various quantities of carbon on the structure and mechanical properties of tungsten crystals, with unchanged content of other impurities. The structure and mechanical properties were studied in extension in the 77-473°K temperature interval, using tungsten crystals with orientation of the growth axis  $\langle 110 \rangle$  and  $\langle 100 \rangle$ , containing 0.01 and 0.001 wt. % C. A decrease in the carbon content in tungsten causes: a) an increase in the ductility of the tungsten crystals, particularly at low temperatures; b) a decrease in the yield point; c) a decrease in the dependence of the yield point on temperature; d) more even distribution of dislocations and enlargement of subgrains in the tungsten crystals. The strong dependence of yield point, necking down, relative

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KOPETSKIY, CH. V., et al., Moscow, IAN SSSR, Metally, No 2,  
Mar-Apr 71, pp 124-129

elongation, and nature of rupture of tungsten crystals on the  
orientation of the extension axis was confirmed.

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USSR

UDC 669.27.-172

KOPETSKIY, CH. V., ORZHEKHOVSKIY, V. L., PASHKOVSKIY, A. I., and  
CHUZHKO, R. K., Moscow

"Influence of Carbon on the Structure and Mechanical Properties  
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Moscow, IAN SSSR, Metally, No 2, Mar-Apr 71, pp 124-129

Abstract: Although the literature contains a number of works dealing with the investigation of the mechanical properties of tungsten crystals, the influence of carbon on these characteristics has not as yet been studied in detail. This work presents a study of the influence of various quantities of carbon on the structure and mechanical properties of tungsten crystals, with unchanged content of other impurities. The structure and mechanical properties were studied in extension in the 77-473°K temperature interval, using tungsten crystals with orientation of the growth axis  $\langle 110 \rangle$  and  $\langle 100 \rangle$ , containing 0.01 and 0.001 wt. % C. A decrease in the carbon content in tungsten causes: a) an increase in the ductility of the tungsten crystals, particularly at low temperatures; b) a decrease in the yield point; c) a decrease in the dependence of the yield point on temperature; d) more even distribution of dislocations and enlargement of subgrains in the tungsten crystals. The strong dependence of yield point, necking down, relative

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KOPETSKIY, CH. V., et al., Moscow, IAN SSSR, Metally, No 2,  
Mar-Apr 71, pp 124-129

elongation, and nature of rupture of tungsten crystals on the  
orientation of the extension axis was confirmed.

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Acc. Nr:

AP0044403

Ref. Code: UR 0239

PRIMARY SOURCE: Fiziologicheskii Zhurnal, 1970, Vol 56,  
Nr 1, pp 48-54

INFLUENCE OF HYPOTHALAMIC AREA ON CILIARY BODY SECRETORY  
ACTIVITY

Bekauri, N. V.; Fadeyeva, O. N.; Chuzhkov, M. I.; Shenger, I. F.

From the I. P. Pavlov Institute of Physiology, USSR Ac. Sci., Leningrad

The effect of electro-stimulation in the hypothalamic area on the secretory activity of the ciliary body has been studied in rabbits and cats. This activity was evaluated by the level of intraocular pressure. Acute experiments in cats have demonstrated that stimulation of various parts of the hypothalamic area (particularly its posterior part) brings about a lowering of intraocular pressure during the 2-3 hrs following stimulation without a corresponding fall in arterial pressure.

In chronic experiments in rabbit stimulation of the mammillary body in the hypothalamic region by electric current or adrenalin electrophoresis into this area evoked during 3-4 hrs following stimulation a lowering of intra-ocular pressure, preferably on the stimulated side.

Data obtained point to the participation of the hypothalamic area in regulating the ciliary body activity and to the role of both the neural and hormonal factor therein.

REEL/FRA  
19771021

USSR

UDC 577.37

CHUZMADZHEV, YU. A., MULER, A. L., and MARKIN, V. S., Institute of Electrochemistry

"Conformation Model of Excitable Cell Membranes. I. Ionic Permeability"

Moscow, Biofizika, No 6, 1972, pp 1,012-1,016

Abstract: The authors propose a model of a cell membrane consisting of globular lipoproteins forming a dimeric lattice. The model shows the relationship between membrane conductivity and concentration of bivalent ions in an external solution and the membrane potential. This relationship satisfactorily explains the steep increase in sodium conduction from the potential  $g_{Na}(\varphi)$  and the shift of the curve  $g_{Na}(\varphi)$  to the right along the axis of the potentials when the concentration of  $Ca^{++}$  in the external solution is increased. The model is in good quantitative agreement with the experimental data.

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USSR

UDC 681.335.713

CHVARKOV, V. B., and PENYUGALOV, N. A.

"A Device for Integrating Functions"

Moscow, Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, No 21, Jul 71, Author's Certificate No 308436, Division G, filed 12 Jan 70, published 1 Jul 71, p 186

Translation: This Author's Certificate introduces a device for integrating functions presented in a system of residual classes. The device contains an operational amplifier, with a capacitor in the feedback circuit, and also comparison circuits and relays. As a distinguishing feature of the patent, the functional possibilities of the device are extended by incorporating a second capacitor in the feedback circuit of the amplifier and by including a single-polarity voltage shaper, controlled switch, kipp oscillator, flip-flop, sign-determining module, and adder. The output of the operational amplifier is connected to one of the adder inputs, through the sign-determining module to its other input, and through the series circuit comprised of the single-polarity voltage shaper and the controlled switch to the inputs of the comparison circuits. The outputs of the comparison circuits are connected through the kipp oscillator to the flip-flop, and the output

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CHVARKOV, V. B., and PENYUCALOV, N. A., *Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki*, No 21, Jul 71, Author's Certificate No 308436, Division G, filed 12 Jan 70, published 1 Jul 71, p 186

of the flip-flop is connected to a relay winding. The plates of the first capacitor are connected through the normally closed contacts of this relay, and the plates of the second capacitor are connected through its normally open contacts to the input and output of the operational amplifier. The plates of the first capacitor are also connected through normally open contacts, and the plates of the second capacitor are connected through normally closed contacts of the same relay to a ground bus and to the adder output.

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CHVARKOVA, V. A.

Photocells

High voltage photocells

UDC 621.383.5.001

Article by A. P. Landman, D. S. Steblov, V. A. Ushakov and V. A. Chvarkova, Tashkent, *Solovievskaya*, Russian, No 1, 1973, submitted 5 July 1972, pp 3-6

This paper describes the volt-ampere characteristics of high voltage photocells with  $\lambda$ -type junctions at radiation intensities varying from 20 to 2500 lux. On the basis of the results obtained, the most varied linearly with the radiation intensity up to 300 lux.

High voltage photocells (VPP) with  $\lambda$ -type p-n junctions have a voltage of about 10 volts from a working surface of one square centimeter and an efficiency of about 10% at the usual illumination (0.1 watt/cm<sup>2</sup>). The VPP current increases more than 1000 times [2] when the radiation flux density increases with a linear rise observed to a radiation density of 10 to 25 watt/cm<sup>2</sup>.

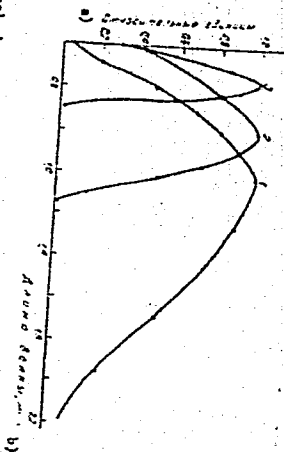


Fig. 1. Spectral characteristics: 1 -- radiator OL-19 (incandescent lamp); 2 -- VPP; 3 -- selenium photocell. Key: a -- relative units; b -- wavelength, microns.

[1 - USSR - F]

CHVARKOVA, V.A.

INVESTIGATION OF HIGH VOLTAGE PHOTOCELLS AT LOW RADIATION INTENSITIES  
Article by A. P. Lyubskanov, D. S. Strelkov, V. A. Ushakov and V. A. Chvarkova;  
Tashkent, Teletekhnika, No. 1, 1973, submitted 5 July 1973, pp. 3-6.

UDC 621.303.5.001

JPRS 60570  
16 November 1973

Caro

This paper describes the voltage-current characteristics of high voltage photocells with  $\lambda$ -type junctions at radiation intensities varying from 20 to 2500 lux. On the basis of the results obtained, the emf varies linearly with the radiation intensity up to 300 lux.

High voltage photocells (VFP) with  $\lambda$ -type p-n junctions have a voltage efficiency of about 10% at the working surface of one square centimeter and an increase in current more than 1000 times [1] when the radiation flux density increases with a linear rise observed to a radiation density of 10 to 25 wac/cm<sup>2</sup>.

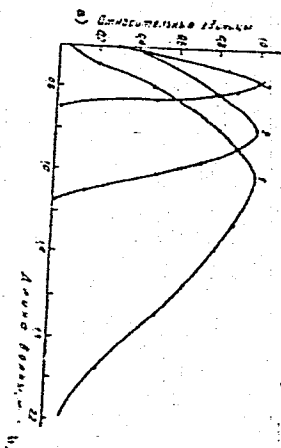


Fig. 1. Spectral characteristics: 1 -- radiator OL-19 (incandescent lamp); 2 -- VFP; 3 -- selenium photocell.  
Key: a -- relative units; b -- wavelength, microns.

[1 - USSR - F]

USSR

UDC: 621.472:621.383

STRETKOV, D. S., UNISHKOV, V. A., and CHVARKOVA, V. A.

"Design and Experimental Investigation of High-Voltage  $n^+-p-p^+$  Photoconverter Structure"

Tashkent, Geliotekhnika, No. 4, 1971, pp 3-8

Abstract: This paper is based on an earlier article (Landsman, A. P. and Stretkov, D. S., Geliotekhnika, 1970, No. 2) in which it was shown that a base contact with a low resistance is a necessary condition for the efficient operation of a high-voltage photoconverter cell with a radiation concentrator. The present paper finds that the best way of attaining this condition is through an  $n^+-p-p^+$  structure, and gives the results of theoretical and experimental investigations into this type of photocell. The authors begin the theoretical part of their paper by considering such a cell illuminated parallel to the plane of the p-n junction, in which the base region, of high-resistance p-type silicon, has a portion with a variable concentration of an acceptor impurity whose distribution is such as to provide a constant field accelerating minority carriers in their movement to the p-n junction. Measurements made in the experimental part of the article show that in several lots of the specimens tested, the width of the p region varied from

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STREBKOV, D. S., et al., Geliotekhnika, No 4, 1971, pp 3-8

370 to 150 microns, the width of the n region from 2-4 microns, and the width of the metallic contact layer from 10-20 microns. Curves are given for the volt-ampere characteristics of the device for a light flux power of up to  $7700 \text{ kW/m}^2$  in a biparaboloid optical oven consisting of light sources with an arc temperature of up to  $5500^\circ \text{C}$ . Spectral characteristics ranging from 400 to 1200 nm are also plotted. The authors are members of the All-Union Order of Red Banner Labor Scientific Research Institute of Current Sources.

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1/2 009 UNCLASSIFIED PROCESSING DATE--11SEP70  
TITLE--EXPERIMENTAL ADOPTION OF AN APPARATUS FOR THE CATALYTIC CRACKING OF  
A VACUUM DISTILLATE OF TURKMEN PETROLEUMS -U-  
AUTHOR--CHVERTKIN, A.L., TIMERKHANOV, R.V., SEDUNOV, YU.P., SIDORIN, V.P.  
COUNTRY OF INFO--USSR  
SOURCE--NEFTPERERAB. NEFTEKHIM. (MOSCOW,) 1970, (1) 1-4  
DATE PUBLISHED-----70  
SUBJECT AREAS--MATERIALS, EARTH SCIENCES AND OCEANOGRAPHY, PROPULSION AND  
FUELS  
TOPIC TAGS--CATALYTIC CRACKING, PETROLEUM DEPOSIT, FLUIDIZED BED, GASOLINE  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAME--1989/1139 STEP NO--UR/0318/70/000/001/0001/0004  
CIRC ACCESSION NO--AP0107628  
UNCLASSIFIED

2/2 009

UNCLASSIFIED

PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0107628

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. OPERATION OF A FLUIDIZED BED CATALYTIC CRACKING INSTALLATION, DIFFERING FROM STD. ONLY IN THE ABSENCE OF A GAS DESULFURIZER, IS DESCRIBED. THE DISTILLATE LEAD, B. 350-500DEGREES, GAVE 0.25PERCENT COKE INSTEAD OF THE 0.1PERCENT DESIGN VALUE. AFTER 2 MONTH'S OPERATION, THE ACTIVITY OF THE CATALYST DECREASED TO 21-22 AND THE GASOLINE YIELD TO 26 WT. PERCENT, THE TEMP. IN THE REACTION ZONE INCREASING TO 485-490DEGREES INSTEAD OF TO 470DEGREES. THE REGENERATION OF THE CATALYST WAS IMPROVED, REDUCING ITS COKE CONTENT TO 0.1-0.2 INSTEAD 0.7-0.9PERCENT. BY IMPROVING THE RECOVERY BOILER, THE TEMP. OF THE CHIMNEY GASES WAS REDUCED FROM 400 TO 240DEGREES.

UNCLASSIFIED



USSR

UDC 621.791.75.753

CHVERTKO, A. I., IVANOV, G. P., and PORKHUN, B. V., Electric  
Welding Institute imeni Ye. O. Paton of the Academy of Sciences  
UkrSSR

"A New Method of Arc Excitation in Hidden-Arc Welding"

Kiev, Avtomaticheskaya Svarka, No 4 (241), Apr 73, pp 44-45

Abstract: A new method of arc excitation in hidden-arc welding, developed by the Electric Welding Institute imeni Ye. O. Paton, is described. By this method, the end of the electrode is brought into vibration for the excitation time and its supply rate is decreased in comparison with the working rate. The vibration is produced in a direction perpendicular to the electrode axis. In this case, the electrode freely penetrates through the flux layer to the object, the clinker desintegrates, and the intermittent contact of the electrode end with the object contributes to a reliable arc excitation. The effectiveness of the described arc excitation is illustrated by an experiment carried out in two variants. Four bibliographic references.

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Welding

USSR

UDC 621.791.85.037(012)

CHVERTKO, A. I., SVYATSKIY, A. M., and NEKRASOV, A. I., Electric Welding Institute ~~Imeni~~ Ye. G. Paton, Academy of Sciences UkrSSR

"Classification of Equipment for Electron-Beam Welding"

Kiev, Avtomaticheskaya Svarke, No 7, Jul 70, pp 61-66

Abstract: Welding with the use of a beam of accelerated electrons has been gaining increasing acceptance in the industry in recent years. The rapid development of this area of technology is due to a number of features and advantages of the electron beam over other heat sources. Electron beam welding can be used successfully for almost any combination of metals and alloys including refractory and chemically active materials. The variety of equipment for electron beam welding has generated a need to classify the equipment according to the most characteristic features. The system described here classes the equipment into 3 categories according to the extent of protection of the weld metal against atmospheric effects. Each class is divided into groups depending on area of application and dimensions of parts to be welded; groups are divided into subgroups with respect to degree of specialization. Examples of classes, groups, and subgroups are given.

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USSR

UDC: 662.215.1

ZINCHENKO, A. D., SMIRNOV, V. N., CHVILEVA, A. A., Chelyabinsk

"Measurement of Electrical Conductivity of Explosion Products During Detonation of a Cast Charge of TG 40/60"

Novosibirsk, Fizika Goreniya i Vzryva, No 3, 1971, pp 422-426.

Abstract: The conductivity of a detonation plasma was measured by two methods: MHD and an electric contact method. The former method is used for the first time for the investigation of a dense plasma ( $\rho = 2-3\text{g/cm}^3$ ). The results of measurement by the two methods agree. The mean specific conductivity of the plasma at 2.4 mm from the origin of the detonation wave was 9.3 mho/cm. The volt-ampere characteristics produced by the MHD method contain a threshold voltage. The threshold voltage depends linearly on the intensity of the magnetic field applied. The mechanism of development of the threshold voltage cannot be determined from the available experimental results. It can only be assumed that the appearance of this effect results from peculiarities of the near-electrode layers in the presence of the magnetic field.

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USSR

UDC 669.721.5:536.422.1

MAKSIMENKO, G. I., LYULICHEV, A. N., CURPRININ, F. I., and KORSUNSKAYA, I. G.  
Kharkov

"Effect of Surrounding Medium on the Process of Thermal Failure of the Surface of Magnesium Alloys in a Vacuum"

Moscow, Fizika i Khimiya Obrabotki Materialov, No 5, Sep-Oct 72, pp 106-112

Abstract: The purpose of this work was to study the effect of the surrounding medium on the initial stage of sublimation, i.e., on the process of thermal failure of the surface of magnesium alloys in a vacuum. The magnesium alloy tested was MA-2. Specifically investigated were the effects of vacuum depth, temperature of the surfaces and medium surrounding the sample, and composition of residual gases in the vacuum chamber. The better the vacuum the better chance there is to exclude the formation of oxide films on the sample due to diffusion processes. Temperature of the sample and surrounding medium increase the possibility of oxide formation as well as the composition of residual gases. Of the three effects studied, the composition of the residual gases contributes the most toward thermal failure of the alloy's surface. It was noted that the composition of the residual gases between the sample and cryogenic tanks differed substantially from that of the gases on the opposite side of the sample. 5 figures, 4 bibliographic references.

1/1

POLAND

SLEDZINSKI, Bohdan, CIESLAKOWA, Ludwika, MALINOWSKI, Romuald;  
Institute of Organic Industry, Warsaw

"The Synthesis of New N,N,N',N'-Tetraalkyldiamides  
of O-1-Chlorophenyl-2-Chlorovinylphosphoric Acids"

Warsaw, Roczniki Chemii, Vol 47, No 3, 1973, pp 637-640

Abstract: In previous papers the authors have described the synthesis of new N,N-dialkylamides of O-1-chlorophenyl-2,2-dichlorovinylphosphoric acids (1) and N,N-dialkylamides of O-1-chlorophenoxy-2,2-dichlorovinylphosphoric acids (2). The alkoxy group in compounds 1 and 2 was replaced by an amide group. Positive results were obtained only in the case of the derivatives of compound 1, and 20 N,N,N',N'-tetraalkyldiamides of O-1-chlorophenyl-2-chlorovinylphosphoric acids were obtained in Perkow's reaction, which have not yet been described in the literature. The raw materials used were N,N,N',N'-tetraalkyldiamides of O-alkylphosphorous acids and chlorides of chlorophenacylidenes or chlorophenacylidines. The methods of preparation and the physical characteristics of the obtained compounds are given.

1/1

USSR

UDC 548.52

DOREMAN, V. F., PYPKIN, B. N., and COHERETYANSKIY, A. L., Institute of Electronic Control Machines

"Effect of Growth Rate and Crystallization Conditions on Defect Formation in Epitaxial GaAs and GaP layers"

Moscow, Kristallografiya, Vol 17, No 6, Nov-Dec 72, pp 1225-1231

Abstract: Previous articles by the authors described the procedure and results of kinetic studies of the epitaxial growth of GaAs and GaP layers in the iodide sandwich process. It was shown that the principal kinetic regularities are exactly alike for GaP and GaAs. The present article attempts to study the effect of growth rate and crystallization conditions on defect formation in epitaxial layers. The main study was devoted to GaAs, but control measurements on GaP specimens obtained under similar conditions permit the conclusions to be applied to GaP, as well. Growth rates are from 10 to 6000 microns/hr, pressure in gas phase from 0.01 to 10 atm ( $C_1$  up to 30 g/l), substrate temperature from 700 to 1000° C, excess of Ga and As components up to 3 g/l, process time 30 min., thickness of investigated

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USSR

DORFMAN, V. F., et al., Kristallografiya, Vol 17, No 6, Nov-Dec 72, pp 1225-1231

specimens from 100 to 3000 microns. Principal types of defects considered: two-dimensional dislocation network coinciding with the interface, "upright" dislocations intergrowing chiefly from the substrate, wide transition region with increased dislocation density, and polar twins.

The dislocation density in epitaxial GaAs layers does not exceed  $1 - 3 \cdot 10^4 \text{ cm}^{-2}$  at a growth rate of up to 1000-1200 microns/hr (at  $V_g = 6000$  microns/hr  $N_d \simeq 1 - 5 \cdot 10^5$ ). It is assumed that the formation of the transition region is due to deviation from stoichiometry in the growing crystal as a result of  $\alpha$ - or  $\beta$ -vacancy capture, which in turn leads to mechanical stresses. In accordance with this, the size of the transition region can be regulated by varying the gas phase composition (the effect can be eliminated by introducing excess Ga in the gas phase or intensified by introducing excess As).

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USSR

DORFMAN, V. F., et al., Kristallografiya, Vol 17, No 6, Nov-Dec 72, pp 1225-1231

Some electrophysical characteristics of epitaxial GaAs and GaP layers are given. Electroluminescent diodes in the red, yellow, and green wavelength ranges were produced from epitaxial GaP layers. The introduction of excess Ga in the gas phase during the growth of the epitaxial layers substantially increases the radiation intensity of the light-emitting diode.

The authors thank K. M. ROZIN and O. L. KREYNIN for useful discussion.

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USSR

CIYMON, A.

"One Method of Formation of Vector-Time Switching Functions from Micro-programs"

Izv. AN EstSSR. Fiz., Mat. [News of Acad. Sci. Est. SSR, Physics, Mathematics], 1973, Vol 22, No 1, pp 22-30 (Translated from Referativnyy Zhurnal Kibernetika, No 10, 1973, Abstract No 10V595)

Translation: This article, closely related to earlier works by the author on the study of vector-time switching functions (VS-functions), studies one possible algorithmic procedure for production of a VS-function if the system of microprograms of the finite automaton is represented in the form studied in a work of V. M. Glushkov (RZHMat, 1967, 11V256). 15 Biblio. Refs.

Author's view

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**"APPROVED FOR RELEASE: 08/09/2001**

**CIA-RDP86-00513R002200610017-2**

**APPROVED FOR RELEASE: 08/09/2001**

**CIA-RDP86-00513R002200610017-2"**

4-Imidazolyl-3-aminobutanone-2 -- a New Inhibitor of Bacterial Histidine Decarboxylase (HDC) from *Micrococcus* Sp. H."

Moscow, Doklady Akademii Nauk SSSR, Vol 189, No 4, pp 895-898

Abstract: 4-Imidazolyl-3-aminobutanone-2 was obtained with its derivative produced by amination ( $\text{NH}_3$ ). In a closed, dark glass vessel, the crystals of the title compound are preserved indefinitely in a refrigerator. In presence of light and air the ketone undergoes a color change through yellow to dark. As an inhibitor it is specific against histidine decarboxylase. It also inhibits lysine decarboxylase by 50%, and aspartate decarboxylase by 40%. It does not react with glutamate decarboxylase nor with tyrosine decarboxylase. The aminated derivative is a weak inhibitor (20%).

The report from the Cardiology Institute of the Academy of Medical Sciences that the title compound and its derivatives, given i. v. to rats, caused a rise in blood pressure from 18-20 mm is of interest.

USSR

UDC: 662.215.1

ZINCHENKO, A. D., SMIRNOV, V. N., CHVILEVA, A. A., Chelyabinsk

"Measurement of Electrical Conductivity of Explosion Products During Detonation of a Cast Charge of TG 40/60"

Novosibirsk, Fizika Goreniya i Vzryva, No 3, 1971, pp. 422-426.

Abstract: The conductivity of a detonation plasma was measured by two methods: MHD and an electric contact method. The former method is used for the first time for the investigation of a dense plasma ( $\rho = 2-3\text{g/cm}^3$ ). The results of measurement by the two methods agree. The mean specific conductivity of the plasma at 2.4 mm from the origin of the detonation wave was 9.3 mho/cm. The volt-ampere characteristics produced by the MHD method contain a threshold voltage. The threshold voltage depends linearly on the intensity of the magnetic field applied. The mechanism of development of the threshold voltage cannot be determined from the available experimental results. It can only be assumed that the appearance of this effect results from peculiarities of the near-electrode layers in the presence of the magnetic field.

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USSR

UDC 669.721.5:536.422.1  
MAKSIMENKO, G. I., LYULICHEV, A. N., GURPRININ, F. I., and KORSUNSKAYA, I. G.  
Kharkov

"Effect of Surrounding Medium on the Process of Thermal Failure of the Surface  
of Magnesium Alloys in a Vacuum"

Moscow, Fizika i Khimiya Obrabotki Materialov, No 5, Sep-Oct 72, pp 106-112

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of O-1-chlorophenyl-2-chlorovinylphosphoric acids were obtained in Perkow's reaction, which have not yet been described in the literature. The raw materials used were N,N,N',N'-tetraalkyl-diamides of O-alkylphosphorous acids and chlorides of chlorophenacylidenes or chlorophenacylidines. The methods of preparation and the physical characteristics of the obtained compounds are given.

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Moscow, Kristallografiya, Vol 17, No 6, Nov-Dec 72, pp 1225-1231

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USSR

DORFMAN, V. F., et al., Kristallografiya, Vol 17, No 6, Nov-Dec 72, pp 1225-1231

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- 23 -

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Translation: This article, closely related to earlier works by the author on the study of vector-time switching functions (VS-functions), studies one possible algorithmic procedure for production of a VS-function if the system of microprograms of the finite automaton is represented in the form studied in a work of V. M. Glushkov (RZHMate, 1967, 11V256). 15 Biblio. Refs.

Author's view

1/1

UDC 577.150.4

USSR

MARDASHEV, S. R., Academician, Academy of Medical Sciences USSR, GONCHAR, N. A., and DARAGOV, N. S., Institute of Biological and Medical Chemistry, Academy of Medical Sciences USSR, Moscow

"4-Imidazolyl-3-aminobutanone-2 -- a New Inhibitor of Bacterial Histidine Decarboxylase (HDC) from *Micrococcus* Sp. N."

Moscow, Doklady Akademii Nauk SSSR, Vol 189, No 4, pp 895-898

Abstract: 4-Imidazolyl-3-aminobutanone-2 was obtained with its derivative produced by amination ( $\text{NH}_3$ ). In a closed, dark glass vessel, the crystals of the title compound are preserved indefinitely in a refrigerator. In presence of light and air the ketone undergoes a color change through yellow to dark. As an inhibitor it is specific against histidine decarboxylase. It also inhibits lysine decarboxylase by 50%, and aspartate decarboxylase by 40%. It does not react with glutamate decarboxylase nor with tyrosine decarboxylase. The aminated derivative is a weak inhibitor (25%).

The report from the Cardiology Institute of the Academy of Medical Sciences that the title compound and its derivatives, given i. v. to rats, caused a rise in blood pressure from 18-20 mm is of interest.

USSR

DABAGYAN, A. V., BORISOV, V. G. and MIKHAYLENKO, N. S.

"The Problem of Prediction of Random Processes"

Upravlyayushchiye Sistemy i Mashiny [Control Systems in Machines],  
1973, No 1, pp 42-46 (Translated from Referativnyy Zhurnal Kibernetika,  
No 9, 1973, Abstract No 9V204)

Translation: The possibility is studied of predicting a stable random  
process formed by a discrete sequence of random quantities distributed  
normally using a linear prediction model. An example is presented of  
prediction of the quality of manufacture of series-produced electric  
motors.

Author's view

1/1

USSR

UDC 519.281

KIREYEV, N. G., DABAGYAN, A. V., LIKHOSHERST, N. V.

"Determination of Dynamic Parameters of Unstable Objects"

Tekhn. Kibernetika (Khar'kov. Otd.). Vyp. 1 [Engineering Cybernetics (Khar'kov Division), No. 1 -- Collection of Works] Kiev, 1970, pp 52-59 (Translated from Referativnyy Zhurnal Kibernetika, No. 4, April, 1971, Abstract No. 4 V205 by V. Noskov).

Translation: A linear unstable system is described by the system of equations

$$\dot{x}_i = \sum_{j=1}^n a_{ij}(t) x_j(t) + F_i(t) \quad (i=1, 2, \dots, n).$$

It is assumed that

$$a_{ij}(t) = \sum_{k=0}^m a_{ij}^{(k)} t^k, \quad F_i(t) = \sum_{k=0}^m f_i^{(k)} t^k.$$

Using the least squares method, estimates are sought for the coefficients  $a_{ij}^{(k)}$  and  $f_i^{(k)}$  with respect to known  $x_j(t)$ . The results of a mathematical experiment ( $n=6$ ) are studied in detail in cases of various a priori information. In one version of the experiment, normal noise of known intensity is added to the observations  $x_i(t)$ .

1/1

The world literature sources cited about 40 case reports. Authors describe 2 such cases they had to deal with. Both patients presented symptoms typical of choroideremia, such as night blindness, reduced central vision and narrowing of vision fields. Ophthalmoscopy showed the absence of choroid over a large extent of the eye fundus, it being preserved in the foveola and in islets along the periphery. In addition to this one of the patients was deaf and mute and presented positive complement fixation and intradermal tests for toxoplasmosis. Quite unusual was also combination of choroideremia and hypermetropic refraction, conspicuous in this case. General tonics, vitamin therapy and biogenic stimulators proved ineffective.

REEL/FRAME

Acc. Nr: AP0049054

Ref. Code: UR0357

PRIMARY SOURCE: Vestnik Oftal'mologii, 1970, Nr / ,  
pp 89-90

TWO CASES OF CHOROIDEREMIA

N. P. Dachevskaya, B. Z. Polonskiy

Summary

The world literature sources cited about 40 case-reports of this affection. The aut-  
Both patients presented symptoms ty-



USSR

UDC 51

DADABAYEVA, R. A., IBRAGIMKHODZHAYEV, S., KASYMOV, S.

"Determining the Linear 'Kinematic' Production Function Considering the Effect of External Loading"

Nauch. zap. Tashkent. in-t nar. kh-va (Scientific Notes of Tashkent Institute of the National Economy), 1971, vyp. 60, pp 49-53 (from RZh-Kibernetika, No 9, Sep 72, Abstract No 9V509)

No abstract

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- 41 -

USSR

UDC 661.63.099.2.095

LINKEVICH, V. A., DADAKHODZHAYEV, A. T., NIYAZOV, M. I., and YEROFEYeva, O. B.,  
Tashkent Polytechnical Institute

"The Problem of Ammophos Granulation During Its Production by a Combination Process"

Izvestiya VUZ -- Khimiya i Khimicheskaya Tekhnologiya, Vol 14, No 5, 1971,  
pp 741-743

Abstract: When ammophos is produced by the combination process, the diameter of its granules changes exponentially. A slowed down growth of the granules, as compared to the process of normal distribution, indicates that along with the growth of the granules of the initial load, formation of new granules takes place. This points out a possibility for retreatment of poorly recoverable of nonrecoverable technological process for production of ammophos in a granulator-neutralizer using a pseudoliquefying layer, which however requires maintenance of an optimal technological process regimen coupled with a continuous separation of the finished product.

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Reader/wave propagation

# PROCEDURE AND APPARATUS FOR MEASURING THE ATTENUATION OF RADAR RADIATION IN CLOUDS AND PRECIPITATION

Article by H. I. Anshayev, Yu. A. Isakova, M. N. Shumilov, Leningrad, Vostochnyye Geofizicheskiy Institut, Izvudy, No 20, Aktivnyye Vozdeystviya na Gradyozhnye Prostranstva, Russian, 1972, pp. 114-126

In the last decade, more and more attention has been given to quantitative measurements in radar studies of atmospheric processes. The advantages of radar measurements with respect to overflewiness and volumes of information, the extended nature of the space covered, and the possibility of measurements at any time of the year or day in any weather have led to the broad application of radar engineering for monitoring precipitation, the meteorological and water content of clouds (hail) and thunderstorm indications, wind observations, and so on. The primary information is obtained by interpretation of such characteristics as the intensity and the Doppler frequency shift of the echo.

The very close relation of the cloud and precipitation hydrosphere to the attenuation of the microwave radiation in them could not until recently be efficiently used as a characteristic of the local attenuation and the attenuation factor. The opportunity of measurement of these characteristics would permit a significant increase in effectiveness of quantitative measurements of the cloud and precipitation parameters. For example, when studying precipitation as a result of the impossibility of measuring the relations of the attenuation with respect to area and in space, usually the relations of the precipitation characteristics to the radar reflectivity are used although there is a more unique relation of the integral characteristics of the precipitation (water content, intensity) to the attenuation factor of the microwaves radiation.

This paper is devoted to finding the procedure and the spectrum for automating the measurements of the attenuation factor and complete attenuation and their distribution in the precipitation and cloud zones.

1

DADALI, Yu. A.

earlier paper published in this same journal (A. L. Senger, *IEEE*, FTP, 6, 1972, p 916). The present paper proposes a revision of the earlier experiment which permits having the temperature and concentration gradients in the same region of the semiconductor specimen. A diagram of this revised apparatus is given. A formula for the thermoelectromotive force is theoretically derived on the assumption that the temperature of the carriers is proportional to the uhf power incident on the specimen. The curves for this formula and for the experimental data as obtained with the revised

1/2

USSR

UDC: 621.315.592

VEYNGER, A. I., KRAMER, N. I., ABDINOV, A. Sh., and DADAMIRZAYEV, G., A. F. Ioffe Physico-Technical Institute, Leningrad

"Benedix Effect in the High-Frequency Heating of Unbalanced Carriers in Germanium"

Leningrad, Fizika i tekhnika poluprovodnikov, No 7, 1972, pp 1354-1358

Abstract: The authors define the Benedix effect as a thermoelectric effect in a uniform semiconductor when the car-

USSR

VEYNGER, A. I., et al, Fizika i tekhnika poluprovodnikov, No 7,  
1972, pp 1354-1358

apparatus are plotted on the same axes (the thermoemf as a function of the uhf power) and are seen to have good agreement.

2/2

- 104 -

suspension contacts of aluminum film. The contacts can be made by a  
conductive junction contacts of aluminum film. The composition is  
according to the following procedure. The silver for the composition is  
prepared from silver chloride by zinc reduction in a 20%  $H_2SO_4$  solution  
(0.3 g of zinc and 5 ml of  $H_2SO_4$  per gram of silver chloride). The zinc is  
is dissolved with agitation and heating. The resultant molecular silver is  
washed, dried, and rubbed into a powder. The tin abietinate is prepared by  
1/2

Luminescence

UDC 661.143(088.8)

USSR

KOKHANOV, B. T., DADAMYAN, Z. M., and DEGTYAREV, A. P.

"A Contact Suspension"

Division H. filed 20 Oct 69, published



USSR

UDC 519.281

KIREYEV, N. G., DABAGYAN, A. V., LIKHOSHERST, N. V.

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Acc. Nr: AP0049054

Ref. Code: UR0357

PRIMARY SOURCE: Vestnik Oftal'mologii, 1970, Nr / ,  
PP 89-90

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USSR

UDC 51

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No abstract

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- 41 -

USSR

UDC 661.63.099.2.095

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DADALI, Yu. A.

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Radiation Precipitation

PROCEDURE AND APPARATUS FOR MEASURING THE ATTENUATION OF RADAR RADIATION IN CLOUDS AND PRECIPITATION

Article by N. I. Abgaryan, Yu. A. Dadali, M. Shamsi Leningrad, Vsesoyuznyy Nauchno-Issledovatskiy Tsentr po Akmivnoye Vozdukhivnoye Grahdovye Protsessy, Moscow, 1972, pp 114-120

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VEYNGER, A. I., et al, Fizika i tekhnika poluprovodnikov, No 7, 1972, pp 1354-1358

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2/2

- 104 -

Luminescence

USSR

UDC 661.143(088.8)

KOKHANOV, B. T., DADAMYAN, Z. M., and DEGTYAREV, A. P.

"A Contact Suspension"

USSR Author's Certificate No 342226, Division H, filed 20 Oct 69, published 13 Jul 72 (from RZh-Khimiya, No 16, 25 Aug 73, Abstract No 16L169 P by N. Sh.)

Translation: The invention relates to the production of electroluminescent capacitors. A contact suspension has been developed which can be used to make reliable contacts on brittle substrates without applying pressure, and at 20°C. The initial components of the suspension are molecular silver, tin abietinate, BF-4, cement and ethyl alcohol. The use of tin abietinate in the suspension combined with the above mentioned components produces electrically conductive junction contacts of aluminum film. The contacts can be made according to the following procedure. The silver for the composition is prepared from silver chloride by zinc reduction in a 20% H<sub>2</sub>SO<sub>4</sub> solution (0.3 g of zinc and 5 ml of H<sub>2</sub>SO<sub>4</sub> per gram of silver chloride). The zinc is dissolved with agitation and heating. The resultant molecular silver is washed, dried, and rubbed into a powder. The tin abietinate is prepared by 1/2



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KOKHANOV, B. T., et al., USSR Author's Certificate No 342226, Div H, filed 20 Oct 69, published 13 Jul 72

melting stannic oxide with rosin powder in a 2:1 ratio, rubbing the residue into a powder and dissolving it in alcohol. The makeup of the suspension is: molecular silver (4 wt.%), methyl alcohol (the quantity depends on the required viscosity of the suspension), BF-4 cement (1 wt.%), and tin abietinate (1 wt.%). The components of the suspension are mixed in a hermetically sealed vessel and applied to a thin film of aluminum. After holding at 20°C for 2 hours, leads can be applied to a contact of the suspension by low-temperature soldering.

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1/2 022 UNCLASSIFIED PROCESSING DATE--20NOV70  
TITLE--STATE OF THE AXIAL CYLINDERS AND CHOLINESTERASE ACTIVITY IN A  
MINCED MUSCLE AUTOTRANSPLANT DURING REGENERATION -U-  
AUTHOR--(03)-ZHENTI, V.K., DALAKISHVILI, M.L., KUTUBIDZE, R.A.  
COUNTRY OF INFO--USSR  
SOURCE--SOGBSHCH. AKAD. NAUK GRUZ. SSR 1970, 57(1), 229-32  
DATE PUBLISHED-----70  
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES  
TOPIC TAGS--AUTOTRANSPLANTATION, CHOLINESTERASE, MUSCLE PHYSIOLOGY, TISSUE  
REGENERATION  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAME--3003/1043 STEP NO--UR/0251/70/057/001/0229/0232  
CIRC ACCESSION NO--AP0130078  
UNCLASSIFIED

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UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP013G078

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. EXPTS. WERE PERFORMED ON FEMALE RABBITS OF VARIOUS AGES. IN AUTOTRANSPLANTS REGENERATION OF MUSCLE ELEMENTS AND THEIR MATURATION OCCURRED AT THE SAME TIME AS AN INCREASE IN THE NO. OF AXIAL CYLINDERS AND AN INCREASE OF CHOLINESTERASE ACTIVITY. AFTER THE REGENERATION ENDED A HIGH ENZYME ACTIVITY IN NERVES WAS FOUND. THE REGENERATES HAD NO PROPRIOCEPTORS. FACILITY: TBILIS. GOS. MED. INST., TBILISI, USSR.

UNCLASSIFIED

1/2 026 UNCLASSIFIED PROCESSING DATE--13NOV70  
TITLE--ELECTRIC MODELS FOR STUDYING THE INFLUENCE OF HEAT REMOVAL ON THE  
DYNAMIC ERRORS OF TEMPERATURE SENSORS OF FINITE DIMENSIONS -U-  
AUTHOR-(02)-DALAKISHVILI, O.N., GOGULADZE, Z.Z.  
COUNTRY OF INFO--USSR  
SOURCE--AKADEMIIA NAUK GRUZINSKOI SSR, SOOBSHCHENIIA, VOL. 57, JAN. 1970,  
P. 153-156  
DATE PUBLISHED-----70  
SUBJECT AREAS--METHODS AND EQUIPMENT, PHYSICS  
TOPIC TAGS--ELECTRIC ANALGG, ERROR ANALYSIS, TEMPERATURE MEASURING  
INSTRUMENT, HEAT LOSS, FREQUENCY CHARACTERISTIC, MODEL  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRA--1996/1452 STEP NO--UR/0251/70/057/000/0153/0156  
CIRC ACCESSION NO--AP0118441  
UNCLASSIFIED

2/2 026

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0118441

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ANALYSIS OF DYNAMIC ERRORS INVOLVED IN TEMPERATURE MEASUREMENTS, WITH THE AID OF THE ELECTRIC MODEL OF A CYLINDRICAL TEMPERATURE SENSOR. IT IS SHOWN THAT HEAT REMOVAL CAN LEAD TO SUBSTANTIAL ERRORS WHEN THE DEPTH OF IMMERSION OF THE SENSOR IS LESS THAN 0.4 OF ITS LENGTH. AT FREQUENCIES ABOVE 40 HZ AND IMMERSION DEPTHS GREATER THAN 0.4 OF THE SENSOR LENGTH, THE ERRORS DUE TO HEAT REMOVAL ARE NEGLIGIBLE. IT IS SHOWN THAT BY USING ELECTRIC MODELS OF TEMPERATURE SENSORS, IT IS POSSIBLE TO STUDY COMPLEX PROBLEMS ASSOCIATED WITH THE ASSESSMENT OF DYNAMIC ERRORS INVOLVED IN THE MEASUREMENT OF UNSTEADY TEMPERATURES, AND THEREBY TO IMPROVE THE ACCURACY OF THE MEASUREMENT RESULTS. FACILITY: VSESIOUZYNI NAUCHNO-ISSLEDOVATEL'SKII INSTITUT METROLOGII, TIFLIS, GEORGIAN SSR.

UNCLASSIFIED

USSR

UDC 541.14

SOKOLENKO, V. A., DADALI, V. A., LITVINENKO, L. M., Academician of the Ukrainian SSR Academy of Sciences, SEMENOV, V. L.

"Effect of Ultraviolet Radiation on the Reaction Rate of the Hydrolysis of Tetraethyl Pyrophosphate Catalyzed by Benzimidazole"

Moscow, Doklady Akademii nauk SSSR, Vol 208, No 6, 1973, pp 1398-1400

Abstract: A significant increase (by 15 orders) in the basicity of benzimidazole in the case of electron excitation and a noticeable increase in the model reaction rate of the hydrolysis of tetraethyl pyrophosphate catalyzed by benzimidazole during ultraviolet radiation were discovered previously [L. M. Litvinenko, et al., DAN, Vol 204, No 5, 1972]. A further study has now been made of the effect of the electron excitation of benzimidazole molecules on the rate of the tetraethyl pyrophosphate hydrolysis reaction. The proportion of excited molecules participating in the catalysis was determined, and the dependence of the reaction rate on their concentration was investigated.

The significant increase in catalytic activity of the benzimidazole molecules on excitation of them and also the significant changes in the acid-base properties of the excited molecules of a number of compounds entering into the composition of proteins [B. V. Donckt, Progr. Reakt. 1/2

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SOKOLENKO, V. A., et al., Doklady Akademii nauk SSSR, Vol 208, No 6, 1973, pp 1398-1400

Kinet, No 5, 273, 1970<sup>7</sup> lead to the assumption that analogous processes can have a defined effect also in enzymatic catalysis. It is possible that the catalytic activity of enzymes can in a number of cases arise from the functional protein groups excited during the enzyme-substrate interactions. The possible nucleophilic mechanism of catalysis of the excited molecule by the catalyst is proposed as was used previously [F. Cramer, et al., Ber., No 94, 1634, 1961<sup>7</sup> to explain the catalytic effect of imidazol in the base state.

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USSR

UDC 51:155.001.57:681.3.06

DADAMYAN, G. G., DOMNIN, B. A., SEMENOV, A. I., TUPISYN, V. G.

"Some Approaches to Formalization of Decision Making Processes in Organizational Structures"

Modelir. Sots. Protsessov [Modeling of Social Processes -- Collection of Works], Moscow, Nauka Press, 1970, pp 119-138 (Translated from Referativnyy Zhurnal Kibernetika, No 3, 1971, Abstract No 3 V569 by M. Chelyshev).

Translation: The problem of decision making in organizations of various degrees of complexity is studied. Any organization consists of a system with definite, regular structural relationships between hierarchical levels of the administration and functional links of the organization. The concept of the expert as a person or group of persons responsible for decision-making at a certain level of the hierarchy in the organization is introduced. Given the levels of the hierarchy of the organization at which decisions are made and the number of alternatives presented to the expert at each level, it becomes possible in principle to construct decision networks modeling the process of decision making in the organization. The purpose of the decision networks is to reflect the entire set of decisions or all possible flows of decisions leading to an unambiguous answer to the question included in a problem. As the process of decision making

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USSR

UDC 51:155.001.57:681.3.06

DADAMYAN, G. G., DOMNIN, B. A., SEMENOV, A. I., TUPISYN, V. G., Modelir. Sots. Protsessov, Moscow, Nauka Press, 1970, pp 119-138.

is formalized, it is assumed that the selection of alternatives by an expert is determined by the preceding trajectory of a document and the induced hypothesis concerning the further path of documents in the organization. The structure of a graph illustrating the decision network is analyzed. The graph of the decision network is characterized by the following conditions: 1) each point connects to at least two lines (except for the root); 2) the "tree" should have no closed loops. This method of modeling of decision making processes is understandable and convenient. It must be noted that the use of decision networks produces only an indirect economic effect, in that it may lead to efficient arrangement and control of the organization being studied.

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USSR

UDC 621.3.049.774.002.5

DADAMYAN, Z. M., DEGTYAREV, A. P., KOKHANOV, B. T., MAKAROV, Yu. Ye.

"A Method of Making Printed Circuits"

Moscow, Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, No 2, Jan 71, Author's Certificate No 290494, division H, filed 13 Sep 68, published 22 Dec 70, p 170

Translation: This Author's Certificate introduces a method of making printed circuits based on making an electrostatic image of the printed circuit on a foil-coated dielectric board, and etching the blank sections. As a distinguishing feature of the patent, the method is simplified by covering the foil-coated board with a dielectric layer such as lacquer with a polyvinyl alcohol base before applying the electrostatic image of the circuit.

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1/2 011 UNCLASSIFIED PROCESSING DATE--13NOV70  
TITLE--EFFECT OF THE NATURE OF THE PROMOTER ON THE CATALYTIC ACTIVITY OF  
ALUMINOCHROMIUM CATALYSTS IN ISOPENTANE DEHYDROGENATION -U-  
AUTHOR-(03)-DADASHEV, B.A., SARYDZHANOV, A.A., GADZHIKASUMOV, V.S.

COUNTRY OF INFO--USSR

SOURCE--AZERB. NEFT. KHOZ. 1970, (1), 36-7 (RUSS)

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CATALYST ACTIVITY, METAL OXIDE, DEHYDROGENATION, ISOPENTANE,  
POTASSIUM OXIDE, CESIUM COMPOUND, RUBIDIUM COMPOUND/(U)K5 CATALYST,  
(U)Al9 CATALYST

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRA--3002/1123

STEP NO--UR/0487/70/000/001/0036/0037

CIRC ACCESSION NO--AP0123550

UNCLASSIFIED

2/2 011 UNCLASSIFIED PROCESSING DATE--13NOV70  
 CIKC ACCESSION NO--AP0128550  
 ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. OXIDE PROMOTERS WERE TESTED AT  
 2.5PERCENT CONCS. (NH SUB2 O SUB3 AND CS SUB2 O FOR INDUSTRIAL CATALYST  
 K,5 AND CS SUB2 O, K SUB2 O, RB SUB2 O, CEO SUB2, AND YB SUB2 O SUB3 FOR  
 AL,CR CATALYST A,19). THE ALKALI METALS WERE THE ONLY ONES AFFECTING  
 YIELDS AND SELECTIVITY IN THE DEHYDROGENATION OF ISOPENTANE (I) TO  
 ISOAMYLENES. PROMOTION OF A,19 CATALYSTS BY K SUB2 O RAISED YIELDS FROM  
 20-18 AND 32-4 TO 37-3 AND 40-3PERCENT AND SELECTIVITY FROM 54-8 AND  
 60-5 AND 68-70PERCENT, RESP., RELATIVE TO UNPROMOTED K,5 CATALYST,  
 WHENDEHYDROGENATION OF I WAS CARRIED OUT IN STATIONARY AND FLUIDIZED  
 BEDS AT 530 AND 350-750DEGREES AND VOL. INPUT RATES OF 0.5-2.0 AND 1-2.65  
 HR PRIME NEGATIVE1, RESP. YIELDS AND SELECTIVITY UNDER STATIONARY  
 CATALYST CONDITIONS WERE 26-3 AND 43-55PERCENT WHEN UNPROMOTED A,19  
 CATALYST WAS USED. RB SUB2 O AND CS SUB2 O WERE SLIGHTLY LESS EFFECTIVE  
 THAN K SUB2 O. FOR STATIONARY CATALYST CONDITIONS, PROMOTION OF K,5  
 CATALYST BY CS SUB2 O RAISED YIELDS AND SELECTIVITY TO 23-20 AND  
 63.5-65PERCENT, RESP.

UNCLASSIFIED

1/2 010 UNCLASSIFIED PROCESSING DATE--30OCT70  
TITLE--MINERALIZATIONS AND SALT ION COMPOSITIONS OF STRATAL WATERS OF THE  
LOWER FORMATION OF THE PRODUCTIVE SERIES ,PK, KS, NKP, OF THE PETROLEUM  
AUTHOR--(04)--MAMEDOV, N.I.; ALIKHANOV, G.G.; DADASHEV, M.N.; KASUMOV, K.A.  
COUNTRY OF INFO--USSR  
SOURCE--AZERB. NEF. KHOZ. 1970, (2), 10-12  
DATE PUBLISHED-----70  
SUBJECT AREAS--EARTH SCIENCES AND OCEANOGRAPHY  
TOPIC TAGS--GEOCHEMISTRY, GROUND WATER, GEOGRAPHIC LOCATION  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRA--3003/0141 STEP NO--UR/0487/70/000/002/0010/0012  
CIRC ACCESSION NO--AP0129397  
UNCLASSIFIED

2/2 010

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0129397

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SOME 38 CHEM. ANALYSES OF STRATAL  
WATERS FROM THE TITLE SERIES IN THE CASPIAN SEA AREA ARE PRESENTED, AND  
THE GEOCHEMISTRY OF THESE WATERS IS DISCUSSED.

UNCLASSIFIED

USSR

DADASHEV, T. M.

"Recognition Algorithms Which are Extreme as to Acuity Threshold"

Zh. Vychisl. Mat. i Mat. Fiz. [Journal of Computer Mathematics and Mathematical Physics], 1973, Vol 13, No 5, pp 737-749 (Translated from Referativnyy Zhurnal Kibernetika, No 10, 1973, Abstract No 10V368)

Translation: This work studies the problem of optimal selection of a recognition algorithm dependent on a certain number of parameters and based on calculation of estimates. The algorithm is evaluated by the generalized error functional

$$\varphi(A) = \frac{1}{m} \sum_{i=1}^m (\varepsilon_i \alpha_i + \omega_i \beta_i).$$

Here  $m$  is the number of objects in the test table,  $\varepsilon_i$  is the cost of an error in classification of the  $i$ th object of the test table,  $\omega_i$  is the cost of refusal to classify the  $i$ th object,  $\alpha_i$  is the characteristic function of the set of objects improperly classified by algorithm  $A$ ,  $\beta_i$  is the characteristics function of the set of objects for which algorithm

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USSR

DADASHEV, T. M., Zh. Vychisl. Mat. i Mat. Fiz., 1973, Vol 13, No 3, pp 737-749

A refused to vote. The estimates themselves are assumed independent of the parameters. In the case when  $\epsilon_i = \epsilon_0 > 0$ ,  $\omega_i = \epsilon_0/2$ , ( $i = \overline{1, m}$ ), necessary and sufficient conditions are given for optimality of the recognition algorithm, a procedure is described for determination of the set of parameters optimizing the recognition algorithm.

In the general case, when not all  $\epsilon_i$  or  $\omega_i$  are identical, a procedure is constructed for determination of values of the parameters optimizing the recognition algorithm.

In conclusion, possible generalizations of the optimization procedure for the case when the estimates depend on the parameters are discussed. The work is supplied with a large number of examples illustrating the basic results of the author.

B. Kuznetsov

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USSR

UDC: 51:330.115

DADAYAN, V. S., CHEREMNYKH, Yu. N. (editors)

"Modeling of Economic Processes. Collection of Articles"

Modelirovaniye ekonomicheskikh protsessov. Sb. statey. Mosk. un-t. Ekon. fak. Otd. ekon. kibernet. i planir. (cf. English above. Moscow University. Economics Faculty. Division of Economic Cybernetics and Planning), 1971, 533 pp, ill. 60 k. (from RZh-Kibernetika, No 11, Nov 71, Abstract No 11V657 K)

Translation: The book will be abstracted by articles.

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USSR

UDC 591.1 + 612.84

DANELIA, D. S., Institute of Clinical and Experimental Neurology

"Appearance of the Augmenting Response During Prolonged Adequate Stimulation of Receptors"

Tbilisi, Soobshcheniya Akademii Nauk Gruzinskoy SSR, Vol 57, No 1, 1970, pp 177-180

Abstract: Experiments were carried out on non-anesthetized cats immobilized by intravenous injection of d-tubercocurarine. It was determined that prolonged low frequency stimulation by means of light or sound stimuli resulted in appearance of high voltage, dual phase, positive-negative waves in the corresponding projection area of the cortex. These potentials are similar to the augmenting response elicited by low-frequency electrical stimulation of specific thalamic nuclei. The similarity in the response to low frequency prolonged peripheral and central stimuli is also proven by their identical reaction to reticular activation.

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USSR

UDC: 681.3.05:51

DANELYAN, T. Ya.

"A Possible Method of Defining a Programming Language in Terms of Parametrized Scheme"

V sb. Teoriya i praktika mashin. obrab. ekon. inform. (Theory and Practice in Computer Processing of Economic Data--collection of works), Moscow, 1971, pp 184-192 (from RZh-Kibernetika, No 11, Nov 71, Abstract No 11V810)

Translation: A method is proposed for describing programming language structures in terms of a system of parameters. A programming language (L-language) in a set of F-allowable parameters is defined as an ordered set of four elements or a quadruplex  $FL = F(l_1, l_2, l_3, l_4)$ , where  $l_1$  is a universal set of abstract objects defined on the object region (numbers, symbols of lines, symbols of operations and functions, special symbols);  $l_2$  is the fundamental set of relations given on  $l_1$ ;  $l_3$  is the form of the base structure of the L-language;  $l_4$  is the aggregate of rules of the method of representation of forms of the L-language which indicates the correspondence between forms of the base structure and the specific form of the relation which is perceived by the receiver. Within this approach to language definition the author

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DANELYAN, T. Ya., Teoriya i praktika mashin. obrab. ekon. inform., Moscow, 1971, pp 184-192

discusses two problems: 1) whether such parametrization is unique, i. e. whether a quadruplex  $FL(l_1, l_2, l_3, l_4)$  can give a unique schematic representation of any programming language; 2) whether the parametric system  $FL$  is independent or generating, i. e. whether it can generate programming languages each of which differs from the given language by exactly one parameter.  
V. Mikheyev.

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USSR

UDC: 550.834

SHEKHTER, Z. Kh., OOKOLOV, G. S., PETROV, B. I., LERNER, B. L., DADERKO, Yu. R., BARYSHNIKOV, G. P., Special Design Office of Seismic Instrument Building

"A Device for Registration of Seismic Information in Digital Form"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obrastzy, Tovarnyye Znaki, No 23, Aug 72, Author's Certificate No 346694, Division G, filed 20 Aug 71, published 28 Jul 72, p 188

Translation: This Author's Certificate introduces a device for registration of seismic information in digital form. The device contains amplifiers in accordance with the number of channels, a multiplexer, an analog code converter, a single-channel digital plotter, and a single-channel playback circuit. As a distinguishing feature of the patent, in order to simplify computer input of recorded seismic information, and to visualize recorded data by means of a single-channel playback device through sequential path-by-path representation of multichannel seismic data in serial digital code on a single track of the magnetic tape, a code converter and an intermediate memory module are added. The code converter

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SHEKHETER, Z. Kh. et al., USSR Author's Certificate No 346694

has a single input connected to the output of the analog code converter, and several outputs of demultiplexed signals in serial code to equal the number of seismic channels. In the registration mode, each of the converter outputs is connected through a commutator to its own section of the intermediate memory. In the mode of path-by-path transcription of signals from the intermediate memory to a single track of the magnetic tape and to the visible information medium, the sections of the intermediate memory which each have their own corresponding seismic recording path are connected to the main head of the digital plotter and to the input of the single-channel playback circuit through the same commutator used for sequential switching of these signal sections.

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1/2 020 UNCLASSIFIED PROCESSING DATE--20NOV70  
TITLE--TECHNICO ECONOMIC CONSIDERATIONS IN SELECTING LIGHT SOURCES AND  
DEVICES FOR LIGHTING CONSTRUCTION AND BUILDING SITES -U-  
AUTHOR--DADICMOV, M.S.  
COUNTRY OF INFO--USSR D  
SOURCE--SVETOTEKHNKA (USSR), NO. 1, P. 10-12 (JAN. 1970)  
DATE PUBLISHED---JAN70  
SUBJECT AREAS--PHYSICS, MECH., IND., CIVIL AND MARINE ENGR  
TOPIC TAGS--VISIBLE LIGHT, LIGHT REFLECTION, CONSTRUCTION ENGINEERING,  
CONSTRUCTION INDUSTRY  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAE--3004/0127 STEP NO--UR/0311/70/000/001/0010/0012  
CIRC ACCESSION NO--APC130889  
UNCLASSIFIED

2/2 G20

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0130889

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DISCUSSES THE CHOICE OF REFLECTORS FOR FILAMENT, FILAMENT IODINE CYCLE AND XENON LAMPS FOR ILLUMINATION OF LARGE WORKING SITES AND ECONOMICAL EVALUATION OF LIGHTING OF OPEN SURFACES 70 TO 400 METRES LONG BY A VARIETY OF LAMPS PROVIDING A MINIMUM ILLUMINATION OF 3 LUX. THE RESULTS OF CALCULATION SHOW THE CAPITAL AND MAINTENANCE COST AGAINST THE SITE LENGTH OF LIGHTING THE UNIT SURFACE AREA USING A LARGE VARIETY OF LAMPS AND DEPENDENCE OF VARIATION OF THE SPECIFIC LAMP RATING ON THE SIZE OF THE SITE. THE GRAPHS ARE ANALYZED AND CONCLUDED BY RECOMMENDATIONS.

UNCLASSIFIED



1/2 022 UNCLASSIFIED PROCESSING DATE--13NOV70  
TITLE--SIMULTANEOUS EXISTENCE OF SEVERAL MYCOSES IN PATIENTS WITH ITSENKO  
KUSHING'S SYNDROME -U-  
AUTHOR--(03)-SHEKLAKOV, N.D., LESHCHENKO, V.M., DADIOMOVA, V.G.  
COUNTRY OF INFO--USSR  
SOURCE--VESTNIK DERMATOLOGII I VENEROLOGII, 1970, NR 6, PP 41-45  
DATE PUBLISHED-----70  
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES  
TOPIC TAGS--SKIN DISEASE, FUNGUS, DISEASE, CHEMOTHERAPY, ADRENAL GLAND,  
PITUITARY GLAND  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRA--3005/1379 STEP NO--UR/0206/70/000/006/0041/0045  
CIRC ACCESSION NO--AP0133331

UNCLASSIFIED

2/2 022 UNCLASSIFIED PROCESSING DATE--13NOV70  
CIRC ACCESSION NO--AP0133331  
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. REPORTS FROM LITERATURE AND THE  
AUTHORS' OWN OBSERVATIONS OF 2 PATIENTS WITH SEVERAL MYCOSES CONCURRENT  
WITH ITSENKO KISHING'S SYNDROME ARE PRESENTED. IN ONE PATIENT  
GENERALIZED AFFECTION OF THE SKIN AND THE SCALP WAS CAUSED BY  
TRICHOPHYTON VIOLACEUM, OF DEEP LAYERS OF THE DERMA (ABSECCES), BY  
CANDIDA ALBICANS, AND OF NAILS, BUT TRICHOPHYTON RUBRUM. IN THE OTHER A  
SIMILAR PRECESS WAS CAUSED BY TRICHOPHYTON VIOLACEUM AND TRICHOPHYTON  
RUBRUM. THE SUCCESS IN THERAPY WAS ACHIEVED BY COMBINATION OF  
ANTIMYCOTIC DRUGS WITH TREATMENT OF DYSFUCTION OF THE PITUITARY ADRENAL  
COMPLEX. FACILITY: TSENTRAL'NYY NAUCHNO-ISSLED.  
KOZHNO-VENEROLOGICHESKIY MZ SSSR I KLINICHESKAYA BOL'NITSA IM V. G.  
KOROLENKO, MOSKVA.

UNCLASSIFIED

1/2 023 UNCLASSIFIED PROCESSING DATE--13NOV70  
TITLE--LIQUID SCINTILLATORS FOR LARGE SCINTILLATION COUNTERS -U-

AUTHOR--(03)--VOYEVODSKIY, A.V., DADYKIN, V.L., RYAZHSKAYA, O.G.

COUNTRY OF INFO--USSR

SOURCE--PRIB. TEKH. EKSP. 1970, 1, 85-7

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY, PHYSICS, MATERIALS

TOPIC TAGS--SCINTILLATOR, POLYSTYRENE RESIN, TOLUENE, ORGANIC AZOLE  
COMPOUND, KEROCENE, GREASE, PETROLEUM PRODUCT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3002/1376

STEP NO--UR/0120/70/001/000/0085/0087

CIRC ACCESSION NO--AP0128776

UNCLASSIFIED

2/2 023 UNCLASSIFIED PROCESSING DATE--13NOV70  
CIRC ACCESSION NO--AP0128776  
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. PROPERTIES OF NEW. LIQ.  
SCINTILLATORS PREPD. FROM CHEAP PETROLEUM PRODUCTS ARE LISTED IN  
COMPARISON WITH A POLYSTYRENE BASED PLASTIC SCINTILLATOR AND A PHME  
BASED LIQ. SCINTILLATOR. THE NEW LIQS. INCLUDE WHITE SPIRIT WITH 1G-L.  
OF 2,5-DIPHENYL OXAZOLE PLUS 0.03 G-L. OF  
1,4-BIS, (5-PHENYL, 2-OXAZOLYL) BENZENE, TS KEROSENE, T KEROSENE, NAPHTHYL,  
VASELINE GREASE AND MOTOR ALKYLATE (ALL WITH THE SAME SCINTILLATING  
ADMIXT.). THE DESCRIBED LIQ. SCINTILLATORS HAVE A HIGH TRANSPARENCY AND  
A LIGHT YIELD COMPARABLE TO THAT OF THE STD. PLASTIC SCINTILLATORS.  
FACILITY: FIZ. INST., MOSCOW, USSR.

UNCLASSIFIED

1/2 008 UNCLASSIFIED PROCESSING DATE--23OCT70  
TITLE--GRAPHICAL METHOD FOR SOLVING THE TWO BODY PROBLEM -U-  
AUTHOR-(02)-DAGAYEV, M.M., RADIZIEVSKIY, V.V.  
COUNTRY OF INFO--USSR  
SOURCE--ASTRONOMICHESKII VESTNIK, VOL. 4, JAN.-MAR. 1970, P. 70-77  
DATE PUBLISHED-----70  
  
SUBJECT AREAS--ASTRONOMY, ASTROPHYSICS  
TOPIC TAGS--NOMOGRAPH, CELESTIAL BODY MOTION  
  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAE--1988/1458 STEP NO--UR/0454/70/004/000/0070/0077  
CIRC ACCESSION NO--AP0106214  
UNCLASSIFIED

2/2 008

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0106214

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DESCRIPTION OF A PRINCIPLE OF CONSTRUCTION NOMOGRAMS FOR A GRAPHICAL SOLUTION OF THE TWO BODY PROBLEM.

ON THE BASIS OF RADIUS VECTOR MAGNITUDES AND COMPONENTS OF THE BODY VELOCITY, GIVEN FOR THE INITIAL MOMENT, A QUICK DETERMINATION MAY BE MADE OF THE MAJOR SEMIAXIS, ORBITAL ECCENTRICITY, PERIOD OF REVOLUTION, MOMENT OF PASSAGE THROUGH THE PERICENTER, AS WELL AS POSITION AND VELOCITY OF THE BODY AT ANY MOMENT OF TIME. NOMOGRAMS CONSTRUCTED FOR BODIES OF THE SOLAR SYSTEM ARE PRESENTED. FACILITY: MOSKOVSKII PEDAGOGICHESKII INSTITUT, MOSCOW, USSR.

UNCLASSIFIED

1/2 023 UNCLASSIFIED PROCESSING DATE--16OCT70  
TITLE--AMINO ACID TRANSPORT IN THE MYOCARDIUM OF RABBITS WITH ALLOXAN  
DIABETES -U-  
AUTHOR--DAGAYEVA, L.N. D  
COUNTRY OF INFO--USSR  
SOURCE--PROBL. ENDOKRINOL. 1970, 16(2), 99-103  
DATE PUBLISHED-----70  
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES  
TOPIC TAGS--UREA DERIVATIVE, DIABETES MELLITUS, MEDICAL EXPERIMENT,  
MYOCARDIUM, AMINO ACID, INSULIN, SULFUR ISOTOPE, CARBON ISOTOPE,  
CHEMICAL LABELLING  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAE--1996/0602 STEP NO--UR/0502/70/016/002/0099/0103  
CIRC ACCESSION NO--AP0117830  
UNCLASSIFIED

2/2 023

UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0117830

ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. IN RABBITS WITH ALLOXAN DIABETES, TRANSPORT OF AMINO ACIDS IN THE MYOCARDIUM WAS INHIBITED. INSULIN PROMOTED A RISE OF METHIONINE PRIME<sup>35</sup> S TRANSPORT IN VIVO. IN VITRO, INSULIN AND GLUCOSE PROMOTED THE TRANSPORT OF GLYCINE PRIME<sup>14</sup> C. FACILITY: LAB. PATHOFIZIOL., INST. EKSP. ENDOKRINOL. KHIM. GORMON., MOSCOW, USSR.

UNCLASSIFIED



1/2 022 UNCLASSIFIED PROCESSING DATE--02OCT70  
TITLE--ADENOSINE TRIPHOSPHATASE ACTIVITY OF MYOCARDIAL EXTRACTS OF RABBITS  
WITH ALLOXAN DIABETES -U-  
AUTHOR--DAGAYEVA, L.N. *D*

COUNTRY OF INFO--USSR

SOURCE--BYULLETEN' EKSPERIMENTAL'NOY BIOLOGII I MEDITSINY, 1970, VOL 69,  
NR 4, PP 62-63  
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--ADENOSINE TRIPHOSPHATE, MYOCARDIUM, RABBIT, DIABETES MELLITUS,  
INSULIN

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1988/1584

STEP NO--UR/0219/70/009/004/0062/0063

CIRC ACCESSION NO--AP0106330

UNCLASSIFIED

2/2 022

UNCLASSIFIED

PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0105330

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN RABBITS WITH ALLOXAN DIABETES THE ACTIVITY OF ADENOSINE TRIPHOSPHATASE ACTIVITY IN THE MYOCARDIUM DECREASES. THE INTRODUCTION OF INSULIN IS CONDUCTIVE TO A RESTORATION OF THE ADENOSINE TRIPHOSPHATASE ACTIVITY IN THE CARDIAC MUSCLE.

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UNCLASSIFIED

1/2 026 UNCLASSIFIED PROCESSING DATE--11SEP70  
TITLE--OXIDATIVE PHOSPHORYLATION IN MITOCHONDRIA FROM THE CARDIAC MUSCLE  
OF RABBITS WITH ALLOXAN DIABETES -U-  
AUTHOR--DAGAYEVA, L.N.  
COUNTRY OF INFO--USSR  
SOURCE--BYULLETIN' EKSPERIMENTAL'NOY BIOLOGII I MEDITSINY, 1970, VOL 69,  
NR 3, PP 55-58  
DATE PUBLISHED-----70  
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES  
TOPIC TAGS--PHOSPHORYLATION, MITOCHONDRIUM, HEART MUSCLE, RABBIT, DIABETES  
MELLITUS, INSULIN, ENZYME ACTIVITY  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAE--1982/0866 STEP NO--UR/0219/70/069/003/0055/0058  
CIRC ACCESSION NO--AP0052300  
UNCLASSIFIED

2/2 026

UNCLASSIFIED

PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0052300

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. UNDER STUDY WAS THE LEVEL OF OXIDATIVE PHOSPHORYLATION IN MITOCHONDRIA FROM THE CARDIAC MUSCLE OF RABBITS WITH ALLOXAN DIABETES AND IN CONDITIONS OF INSULIN THERAPY. DURING THE DETERMINATION OF PHOSPHORYLATION BY THE INCREASE OF CREATING PHOSPHATE THERE WAS NOTED A SHARP REDUCTION OF OXIDATIVE PHOSPHORYLATION (DISSOCIATION). THE HEXOKINASE ACTIVITY IN EXTRACTS FROM THE CARDIAC MUSCLE OF RABBITS WITH ALLOXAN DIABETES WAS REDUCED MORE THAN TWO FOLD. ADMINISTRATION OF INSULIN TO RABBITS WITH DIABETES RESTORED THE HEXOKINASE ACTIVITY IN EXTRACTS FROM THE CARDIAC MUSCLE AND THE LEVEL OF OXIDATIVE PHOSPHORYLATION IN THE MITOCHONDRIA. UPON THE ADDITION OF AN EXCESS OF HEXOKINASE TO A MITOCHONDRIAL SUSPENSION FROM THE CARDIAC MUSCLE OF RABBITS WITH ALLOXAN DIABETES DISSOCIATION OF PHOSPHORYLATION AND RESPIRATION WAS NOT OBSERVED. REDUCTION OF OXIDATIVE PHOSPHORYLATION IN MITOCHONDRIA FROM THE CARDIAC MUSCLE OF RABBITS WITH ALLOXAN DIABETES IS SECONDARY AND IS CAUSED BY A DEFICIENCY OF SYSTEMS ACCEPTING PHOSPHATE.

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